

Appl. No. : 10/825,071
Filed : April 15, 2004

REMARKS

Claims 1-2, and 8 have been cancelled. Claims 3-4 have been amended such that their dependency has changed. Claims 7 and 9-18 have been amended to include the limitations of the rejected base claims from which they previously depended. Claim 21 has been amended to remove a reference numeral. No new matter has been added.

Discussion of Rejection under 35 U.S.C. 102(b)

Claim 20 was rejected as under 35 U.S.C. 102(b) as being anticipated by Michelson (U.S. 4,628,933).

Michelson discloses a retina implant with a plurality of electrodes intended to restore sight where it has been lost, for example as a consequence of retinitis pigmentosa. Regarding polarization caused by a net potential difference between the stimulus electrode and the nearby tissue, Michelson states that "If a net charge remains between the two conductors, ions such as chloride may migrate to the oppositely-charged conductor, causing polarization of the conductors and degradation of the neural stimulation." (Col. 4, Lines 2-6). Regarding overcoming this problem, Michelson discusses an option to "connect a large resistor between the ground conductor and the signal conductor." (Col 4, Lines 10-12). Also Michelson discusses that "a charge-balanced square wave signal generates no residual electrical charge at the tissue-metal interface of the electrodes, and greatly aids in alleviating the electrode polarization problem noted above."

Referring to Figure 6, Michelson also discusses circuitry configured to "tune the responses" of the amplifiers 36 "to the frequency response bandwidth of the retinal neurons, to shape the output waveform in a charge-balanced square wave format, and to trim the voltage and current outputs to acceptable levels for the neurons."

However, Michelson does not include all of the limitations of Claim 20. For example, Michelson does not discuss an implant wherein at least one sensor electrode is provided with the aid of which it is possible to determine a polarization voltage across the stimulation electrode. While Michelson discusses circuitry configured to tune the responses of amplifiers which stimulate retinal neurons, the circuitry discussed does not sense the polarization voltage. And

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while Michelson discusses methods for alleviating the effect of polarization, Michelson does not disclose determining a polarization voltage with a sensor electrode.

Accordingly, Applicant respectfully submits that Claim 20 overcomes the Michelson art and is in condition for allowance. Additionally, because each of Claims 21 and 22 depend from Claim 20, Applicant submits that Claims 21 and 22 are also in condition for allowance.

Discussion of Allowable Subject Matter

The Examiner objected to Claims 7, 9, and 12-19 as being dependent from a rejected claim. Applicant submits that through the amendments, each of Claims 7, 9, and 12-19 include all of the same limitations either independently or through dependency and no longer depend from a rejected claim. Accordingly, Applicant submits that each of Claims 7, 9, and 12-19 are in condition for allowance.

In addition Applicant submits, in accordance with the Examiners characterization of Claims 23 and 24 in the Office Action, that Claims 23 and 24 are in condition for allowance.

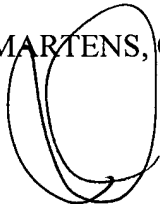
Furthermore, because Claims 3-6, 10-11, and 19 each depend from one of allowable Claims 23 and 24, Applicant respectfully submits that Claims 3-6, 10-11, and 19 are in condition for allowance.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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By: 
John M. Carson
Registration No. 34,303
Attorney of Record
Customer No. 20,995
(619) 235-8550